

REMARKS

The Office Action of February 18, 2009, has been carefully studied. Claims 12 and 17-22 currently appear in this application. These claims define novel and unobvious subject matter under Sections 102 and 103 of 35 U.S.C., and therefore should be allowed. Applicant respectfully requests favorable reconsideration and formal allowance of the claims.

Allowed Claims

It is noted that claims 17-22 are allowed.

Art Rejections

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Oku et al., EP 1321148.

The Examiner's position is that the difference between applicant's claimed method and the method disclosed by Oku is that Oku does not explicitly disclose preventing denaturation of an ingredient in the composition. Based upon this, the Examiner alleges that it would have been obvious to one having ordinary skill in the art at the time the claimed invention was made in view of Oku to inhibit a radical reaction by incorporating a composition of the claimed cyclotetrasaccharide into a composition (such as a food or pharmaceutical) containing an unsaturated organic compound such as a fatty acid or lipid in order to prevent an

ingredient such as a protein or a peptide from being denatured in the composition by peroxides that are formed by radical reaction. The Examiner's position is that the type of compound that produces or causes the radical reaction is immaterial, since Oku discloses that the cyclotetrasaccharide inhibits the reaction active oxygen eliminating activity (that removes radical formation).

This rejection is respectfully traversed. Oku discloses a method for inhibiting the reduction of active oxygen eliminating activity of a substance having said activity, such as enzymes, pigments, polyphenols, and vitamins, Oku incorporates the cyclotetrasaccharide or a reduction inhibiting agent into a composition containing the substance that has oxygen-eliminating activity. That is, Oku describes a method for inhibiting the oxygen-eliminating activity of compounds such as enzymes, pigments, and polyphenols, in a composition. Oku does not disclose or suggests a method for directly inhibiting the formation of active oxygen, as claimed herein. It is therefore apparent that the composition into which the cyclotetrasaccharide is incorporated in Oku is one that contains "a substance having active oxygen eliminating activity."

Contrary to the Oku method, the method claimed in claim 12 of the present application is a method for inhibiting formation of peroxide by unsaturated compounds, these unsaturated compounds being selected from the group consisting of fatty acids, simple lipids, and conjugated lipids. This formation of peroxide is inhibited in the presently claimed method by inhibiting radical reaction. As such, the composition to which the cyclotetrasacharide is added does not require "a substance having active oxygen eliminating activity", as does the composition in Oku.

For example, neither lipoprotein or linloeic acid is "a substance having active oxygen eliminating activity." However, Experiments 1-3 and 1-4 in the present specification disclose that radical reaction of lipoprotein and linoleic acid is well inhibited by cyclotetrasaccharides. No "substance having active oxygen eliminating activity" is contained in the compositions of in Experiments 1-3 and 1-4.

Furthermore, the method of Oku does not inhibit a reaction between "a substance having active oxygen eliminating activity" and active oxygen. In contrast to this, the method claimed herein inhibits radical reaction of unsaturated compounds. Thus, the method claimed herein is quite different from the method disclosed in Oku.

It is respectfully submitted that Oku does not teach that the cyclotetrasaccharide inhibits radical reaction of unsaturated compounds selected from the group consisting of fatty acids, simple lipids and conjugated lipids, regardless of the presence of "a substance having active oxygen eliminating activity." It is, therefore, respectfully submitted that the method as claimed in claim 12 is not obvious over Oku, and withdrawal of the rejection is respectfully requested.

In view of the above, it is respectfully submitted that the claims are now in condition for allowance, and favorable action thereon is earnestly solicited.

Respectfully submitted,

BROWDY AND NEIMARK, P.L.L.C.
Attorneys for Applicant

By: 

Anne M. Kornbau
Registration No. 25,884

AMK:srd
Telephone No.: (202) 628-5197
Facsimile No.: (202) 737-3528
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